

Magazine
OCTOBER 1960

The I.C.I. Magazine, price twopence, is published for the interest of all who work in I.C.I., and its contents are contributed largely by people in I.C.I. Edited by Sir Richard Keane, Bt., and printed at The Kynoch Press, Birmingham, it is published every month by Imperial Chemical Industries Limited, Imperial Chemical House, Millbank, London, S.W.1 (Phone: VICTORIA 4444). The editor is glad to consider articles and photographs for publication, and payment will be made for those accepted.

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The I.C.I. Magazine

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Contributors



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Robin Todhunter is Overseas Director. He joined I.C.I. in 1927, had a distinguished career in the Navy during the war, and then became deputy Purchases Controller and subsequently Controller. Outside his work he has many interests—cricket, squash, golf, photography, sketching, choral singing and fast cars.



F. R. Bradbury is head of the Pest Control Section of General Chemicals Division. His interest in pesticides began in India, where he controlled a unit investigating the use of DDT against malaria-carrying mosquitoes. He has recently made a visit to Nigeria and the Southern Cameroons to study the application of copper fungicides to cocoa and bananas.

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FRONT COVER: Boy with Swan, near Fort William, Scotland, by Miss J. S. Whimster (Nobel Division)
(Taken with Agfa Sillette camera, Kodachrome 35 mm. film, 1/50 sec. at f8)



POINT of VIEW

THE PRICE OF LAND

By Mark Abrams

EARLY this summer reporters, both in newspapers and on television, discovered that the price of land was rising sharply, and we were treated to several startling but accurate accounts of a few acres being sold for tens of thousands of pounds. Later in the year interest shifted to the increased rents now being asked of tenants who had escaped the full force of rent decontrol in 1957. Again, some of the increases reported seemed startling, and it was therefore not surprising that the more serious newspapers set out to analyse the situation. For example, at the beginning of September two lengthy articles on the subject were published in *The Times*, and the author set out his position right at the beginning: "Rent is a price paid for house accommodation. Like all prices, it is the outcome of supply and demand forces where the economy is free." He went on to argue that, by and large, it is right and proper that rents and the price of land should be settled by the free play of supply and demand.

In the correspondence which followed these articles there was one letter which was noteworthy because it restated a point of view about the price of land which has a history of at least a hundred and fifty years. And its longevity and vitality are matched only by its fallaciousness.

Briefly, the argument is that land is

unlike any other commodity. If there is an increase in the demand for cars or refrigerators, bootlaces or stockings, the output of these goods will be increased and the profits of those making these goods will return, after an initial boost, to their normal level. But, it is argued, where land is concerned this balancing out can never take place because the total supply of land is fixed for all time. In a free economy, if the demand for land increases, rents go up and nothing can be done to bring them down again by increasing the supply of land.

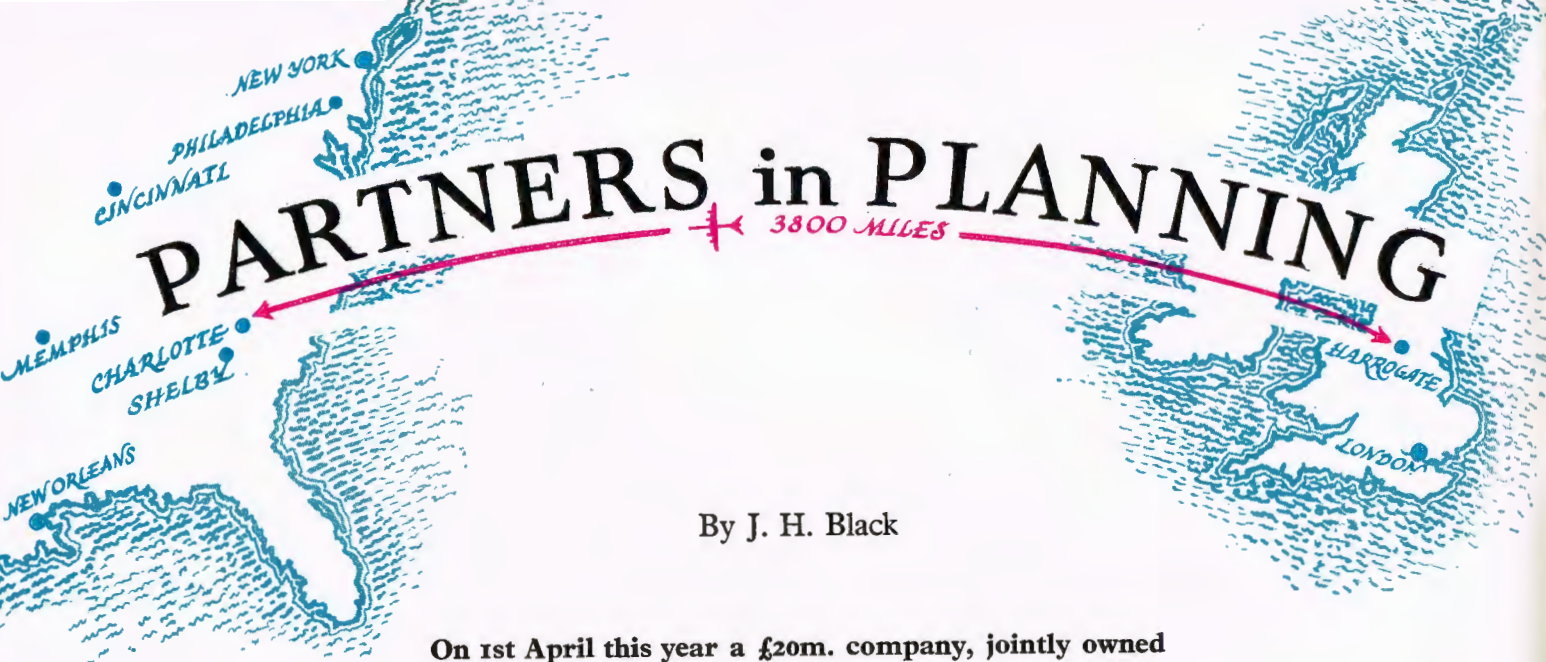
IN a superficial sense this viewpoint is correct. There are 56 million acres of land in Great Britain today, and that is precisely what we had a hundred years ago, when the demand for land was probably only half of what it is today. On a simple count of acres the supply of land has remained constant, but in any sensible consideration of the subject the effective supply has increased greatly. This has come about by raising the productivity of the average acre in use. By growing eight tons of potatoes on an acre of land instead of four tons, we have, for all practical purposes, doubled the supply of potato-growing land. Again, if, without increasing the size of his herd or his holding the average farmer succeeds in raising the yield of milk per cow by 20 per cent, for all practical

purposes he has increased by that much the effective supply of dairy farming land.

If we have created an elastic effective supply of agricultural land in this way—that is, by raising the productivity of the average acre of farmland—presumably the same thing can be done with urban land. We can raise the effective supply by increasing the productivity of land used for building dwellings. In practice, what this calls for is that we increase the number of homes built to the acre. On new developments in recent years the figure, as the result of planning regulation, has worked out at about ten dwellings to the acre. If we now achieve twelve to the acre, the effective supply of land for house accommodation will have been increased by 20 per cent.

A CHANGE in policy which lifted present restrictions on the number of dwellings built to the acre would increase the supply of houses and hold down their price. And this could be done without encroaching on any of the present Green Belts round our main urban centres. In fact, in coping with our housing problem it looks very much as if the best solution is the one so often advocated for many of our other problems—that is, a more intensive and more productive use of the stock of resources we already have.

The opinions expressed in this article are not necessarily those of the Company



By J. H. Black

On 1st April this year a £20m. company, jointly owned by I.C.I. and the Celanese Corporation of America, began producing 'Terylene' (or 'Fortrel' as it is called in the States) at Shelby, North Carolina. The president of the new company, Fiber Industries Inc., here lifts the veil on a fascinating story of secret negotiation and planning.

THE afternoon of Sunday, 30th November 1958, saw Dr. A. Caress, then Chairman of Fibres Division, standing in a field of cotton in North Carolina, U.S.A., sketching in his diary a lone knarled tree—for posterity. Today that field is dominated by Stage I of a £20,000,000 polyester fibre plant belonging to Fiber Industries Inc. This new company is jointly owned by Imperial Chemical Industries Limited and Celanese Corporation of America and its product is known as 'Fortrel,' although you know it better as 'Terylene.'

It all started in January 1958 at a meeting held at I.C. House in London between directors of Celanese and I.C.I. to discuss the possibility of introducing 'Terylene' into the United States.* The basis of the discussion was to see if the design and manufacturing knowledge of I.C.I. could be combined with the marketing and sales organisation of Celanese. Both parties agreed they were interested, but many more facts and figures would be required before embarking on a project of this magnitude. Probably more important, both parties wanted to get to know one another better.

In February 1958 Mr. P. C. Allen, a director of I.C.I.

and now President of Canadian Industries Ltd., came to the United States. Mr. Allen met with Mr. Blancke, Chairman of the Board of Celanese, and a representative group of Celanese officials. A trip was arranged for Mr. Allen to visit the research, development and manufacturing facilities of the Celanese Fibers and Chemical Divisions in North Carolina and Texas. On his return to England Mr. Allen conferred with his associates, and it was agreed to send a team of eight men to the United States to investigate jointly with Celanese the potential for polyester fibre in America.

Dr. Caress hand picked a team of experts in marketing, manufacturing, development, engineering and patent law. These men, under the chairmanship and fatherly eye of Dr. Edward Kamm, took up residence in Charlotte, North Carolina, for seven weeks.

Mr. John Brooks, then Head of the Celanese Fibers Division and now an Executive Vice-President of the Company, appointed a team to work with the I.C.I. group.

It must be remembered that neither I.C.I. nor Celanese wanted any publicity on what was going on. They were only in the "walking-out" stage. Looking back, it is difficult to understand how the secret was so

well kept. Eight Englishmen in a city the size of Charlotte is not an everyday occurrence. Many of these men were paying their first visit to the United States and were intent on making the best possible use of their time. In March and April North Carolina is a galaxy of colour, resplendent with azaleas and camellias; the birds are on their flights northward and the golf courses are coming into top shape.

In spite of all this, Edward Kamm and John Brooks kept the teams hard at work. Each I.C.I. man was teamed up with his opposite number in Celanese, and it was a great experience to see how these two groups from the opposite sides of the Atlantic worked together both in the formal meetings and in the informal

discussions, which often ran well into the night. A joint report of over 100 pages was issued late in April 1958 covering all aspects of the proposed project. As well as agreeing on a master plan, each team had obviously gained a high degree of respect for the other, and I believe this ability to work together was largely responsible for a now greater desire to launch a joint project.

A basis of understanding had now been reached, and in June Mr. Blancke took a team of financial and legal executives to England. The lawyers went right to work on the agreements while Mr. Blancke and others met with I.C.I. executives to try to resolve some of the knotty problems. Because it was not

SIX VITAL STEPS in a £20 MILLION JOINT PROJECT



MEETING. Directors of I.C.I. and American Celanese get together in London to discuss possibilities.



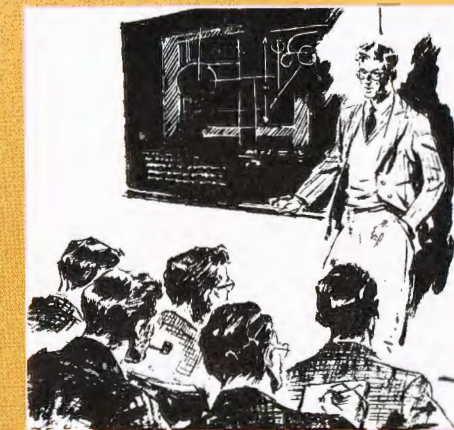
EXPLORATION. Mr. P. C. Allen, then I.C.I. Director responsible for Fibres, visits Mr. Blancke, chairman of American Celanese, in the States and examines potentialities.



INVESTIGATION. A team of eight hand-picked I.C.I. men visits American Celanese secretly and each confers with his opposite number.



AGREEMENT. Mr. Blancke, chairman of American Celanese, visits London with two colleagues, and agreement is swiftly reached on all outstanding points.



TRAINING. American technical graduates, recruited to act initially as shift supervisors, undergo eight months' training, mostly at Wilton, in preparation for plant start-up.



TARGET. On 1st April 1960 first batch of American-made 'Terylene,' called 'Fortrel' in America, is produced on date originally planned.

* The background to these discussions was the approaching expiration of the U.S.A. patents covering the basic invention of polyester fibre by Whinfield and Dickson. These patents were originally the property of the Calico Printers' Association, who in 1947 sold the world rights (with the exception of the U.S.A.) to I.C.I., and sold the U.S.A. rights to E. I. du Pont de Nemours & Co. Quite separately I.C.I. and du Pont then worked out their own processes of manufacture, and du Pont developed a substantial market in the U.S.A. under the trade name of 'Dacron.'

possible at that time to reach agreement on all points, Mr. Blancke, accompanied by two of his associates, made another trip to England early in September 1958. Agreement was reached swiftly at this meeting, and all that remained was for both boards of directors to approve the agreements. This was quickly done and the formal contracts were signed, giving birth to the new company named Fiber Industries Inc.

The cornerstone of this partnership was that the technical know-how for the manufacture of polyester fibre in the United States was to be provided by I.C.I., while the marketing and merchandising was to be handled by Celanese. Now that agreement had been reached, the new eight-man board of directors, four from each company, met and plotted the course that the new company was to follow. A management team was appointed to recruit personnel to get the first operating unit in production as soon as possible. Late in 1958 and early 1959 an eight-man I.C.I. design team came to the United States.

Construction by Stages

The programme laid down by the Board called for the ultimate construction of a 40,000,000 lb./year plant to be built in stages; Stage I called for an 8,000,000 lb./year staple fibre unit with a build-up to 26,000,000 lb./year as soon as market requirements demanded. A plant site was chosen near Shelby, North Carolina, a market town with a population of 20,000. The Shelby area seemed ideal for a plant site, for not only was this the centre of the textile industry, but the community welcomed new companies. Workers were available, basic utilities were at hand, and the town and residential areas would be appealing even to the most discriminating. In addition it was within easy driving distance of Charlotte, where the Celanese marketing headquarters were located.

An engineering firm and a construction firm were selected, and on 26th January 1959 ground was broken for Stage I. The plant site, comprising some 50 acres in a 250 acre tract, was cleared and the necessary underground water, sewer and steam lines for a 40,000,000 lb./year plant were laid.

The civil work at the plant was largely the responsibility of United States engineers and designers, while the I.C.I. team was responsible for the processing machinery and equipment, much of it of improved design.

The demands on engineering skills were great. To postpone the expenditure of capital, decisions had to

be made almost daily on the problem of whether to provide buildings and services at Stage I for the final target of a 40,000,000 lb. plant or merely for the first stage of an 8,000,000 lb. plant, or for an intermediate stage of a 26,000,000 lb. plant.

Buying in Secret

Equipment was bought both in Great Britain and in the United States, depending on the secrecy involved, the quality, the cost and the delivery dates. In February 1959 it was agreed with the engineers, the contractor and the design team that a 31st March 1960 completion date for Stage I was attainable. In spite of a lengthy steel strike and many other work stoppages, spinning began on 1st April 1960. Eleven days later the plant was producing 'Fortrel,' the U.S. trade name for 'Terylene.'

While construction was going on at the plant site, personnel were engaged to man the project. Although key personnel were provided by Celanese and I.C.I. most of our people were recruited in America from outside the ranks of the parent companies. To start the plant it was decided that initially technical graduates would act as shift supervisors. These men spent eight months preparing for the start-up target date of 31st March 1960. Their basic training took place in the Millhaven Plant of C.I.L. and in the 'Terylene' Works at Wilton. On their return to Shelby they supervised the installation and testing out of equipment, wrote up operating manuals, attended courses in supervisory techniques, effective communications and first aid, and hired and trained their production workers. This eight-month training period was largely responsible for getting the plant on stream in such an orderly manner.

Preparing for D-day

Concurrently with the building of the plant and the training of an operating team, work was going on in the fields of research, development and marketing in anticipation of the day that the product would be available for sale. The I.C.I. Fibres Research Department at Harrogate recognised the problem of entering into the American market with a competitive fibre, and they have enthusiastically met the challenge. The Celanese Application and Product Development Department evaluated prototype fibre, and by the time the plant was producing material they had a variety of fabric constructions ready for submission to the trade. The Marketing Department formulated



The £20m. 'Fortrel' plant of Fiber Industries Inc. at Shelby, North Carolina

their plan of attack on the 100,000,000 lb./year U.S. polyester fibre market now enjoyed by Du Pont. An advertising campaign was prepared, and today the name 'Fortrel' is being actively promoted to the trade, to the stores and to the consumer.

A great deal has been accomplished in a short period of time. Many people on both sides of the Atlantic have given unselfishly of their time and their talents to make this new company what it is today. All who have participated should feel justly proud, for not only have they helped to get Fiber Industries off to a good start but they have helped cement relationships between two great nations.

What of the future? Design and engineering for a 5,000,000 lb./year filament yarn (the present plant is

staple fibre only) plant is almost completed, machinery and equipment have been ordered and construction is well under way; commercial quantities of yarn will be available to the trade in the second quarter of 1961. Stage III and Stage IV only await market build-up. Stage V and Stage VI are for the future. The acceptance of a polyester fibre by the American people has already been proved, and the present market of 100,000,000 lb./year is expected to double in the next five years.

The responsibility for meeting this challenge has been entrusted to a young and enthusiastic team from both sides of the Atlantic, who will add a few more pages to the polyester story started so brilliantly by Rex Whinfield in 1941.

THE WASHING SERVICE GIRL

Interviewed by Denzil Batchelor

MARY Varga is as happy at 15 as only the luckiest of women can hope to be once in a lifetime. She is healthy, pretty as a peach, and has a job she thoroughly enjoys: you can't beat that for good fortune. Moreover, in Mary's case you must contrast all this sunlit time with the black shadows of the past. Three years ago, with her father (who worked in a shop) and her mother (who worked in a nursery), Mary escaped from Hungary in the dead of night across the Austrian border.

She and her family came to England and settled in Alderley. When Mary went to Brownlea Green Secondary Modern School she couldn't speak a word of English. Now she speaks it better than Hungarian.

Six months ago Mary got her first job in the Washing Service Section in the Pharmaceuticals Division Research Laboratories at Alderley Park. She's one of three staff members and 20 payroll employees who wash and sterilise the glassware used by the biologists in their laboratories. In a month this little unit (all women except the boss) will wash and, where necessary, sterilise over a hundred and fifty thousand pieces of glassware, breaking but one piece in a thousand. At the end of each day's work the unit aims to have in store twice the average day's consumption of clean glassware.

This, briefly, is the scope of Mary's job. From 9 to 10.30 a.m. the autoclaves (great steam chambers) are filled by the biologists with the glass they used the day before and now want washing. The organisms are rendered harmless by autoclaving, thus protecting the girls of the Washing Service, who take over the glass from this point.

Now comes the first of the four stages of their job: segregation. The glassware to be washed and sterilised has to be divided into categories—they run into several hundreds when you have dealt with innumerable types of bottle, as well as pipettes, beakers, petri dishes, test tubes, flasks, measuring cylinders and many other types which, if you are Mary Varga, you would have thought humanity could do without.

"I love my job," says Mary. "All except the segregation section. It smells."

Once the glass has been classified and starts on its journey towards absolute cleanliness it quickly ceases to smell. The second stage in the process is the sink line. Here the glass travels through boiling sinks, washing sinks and rinsing sinks to distilled water sinks, while in the more intricate type of washing, tissue-culture glass-

ware is finally rinsed with deionised water. This is a job undertaken by two specialists, though the time may be coming when every girl in the unit will put her hand to this work as she now does to every other process in the section's activities.

Mary can handle, for instance, the Dawson automatic detergent washer. This is an eighteen-gallon tank heated by a $7\frac{1}{2}$ kilowatt electric element, with pumps operating forty-nine jets above and below the article (graded as semi-clean beforehand) which arrives to be washed. Three minutes in the automatic washer, and then a fifteen-second rinse in water from the mains: Mary can handle it as if she had been doing it all her life.

So to the next stage, the rinse in distilled water; thence to the drying cabinet, heated by steam coils to a temperature of 160° Fahrenheit.

That's the main job of the Washing Section broken down into its basic activities. You will find two girls at work on the segregation section—each girl does no more than one day a week here, so Mary's distaste for its smell is not allowed to discolour a very large part of her working life. Four girls are busy on the sink lines, with perhaps two more assigned to the Dawson washer, and one at work exclusively on pipettes. Two or three of the team are occupied with passing the glassware or with rinsing.

The next stage is in the Processing and Assembly Department. Here the girls line up the non-sterile glass, after careful examination, for distribution to the laboratories needing them. If the glass has to be sterilised it goes to one of four benches where work is done on capping, plugging of test tubes or pipettes. Then comes the sterilisation at a temperature of 160° Centigrade in electric hot-air ovens or in autoclaves.

Such is Mary's job—so far. When she has been a little longer with the section she may be asked to help with its most intricate work: the preparation of media and solutions. This means, among other things, making jellied broths for the growing of organisms to be used in microbiological research by the biologists.

To you and me it looks like a job, but to Mary it's an escape from a horror that has already come to seem as unreal as last week's nightmare into a happiness she has, thank God, learned to take for granted. "Go back to Hungary?" she says. "No, thanks!" And she goes back to her shift in segregation, which somehow doesn't seem to smell too bad this afternoon.

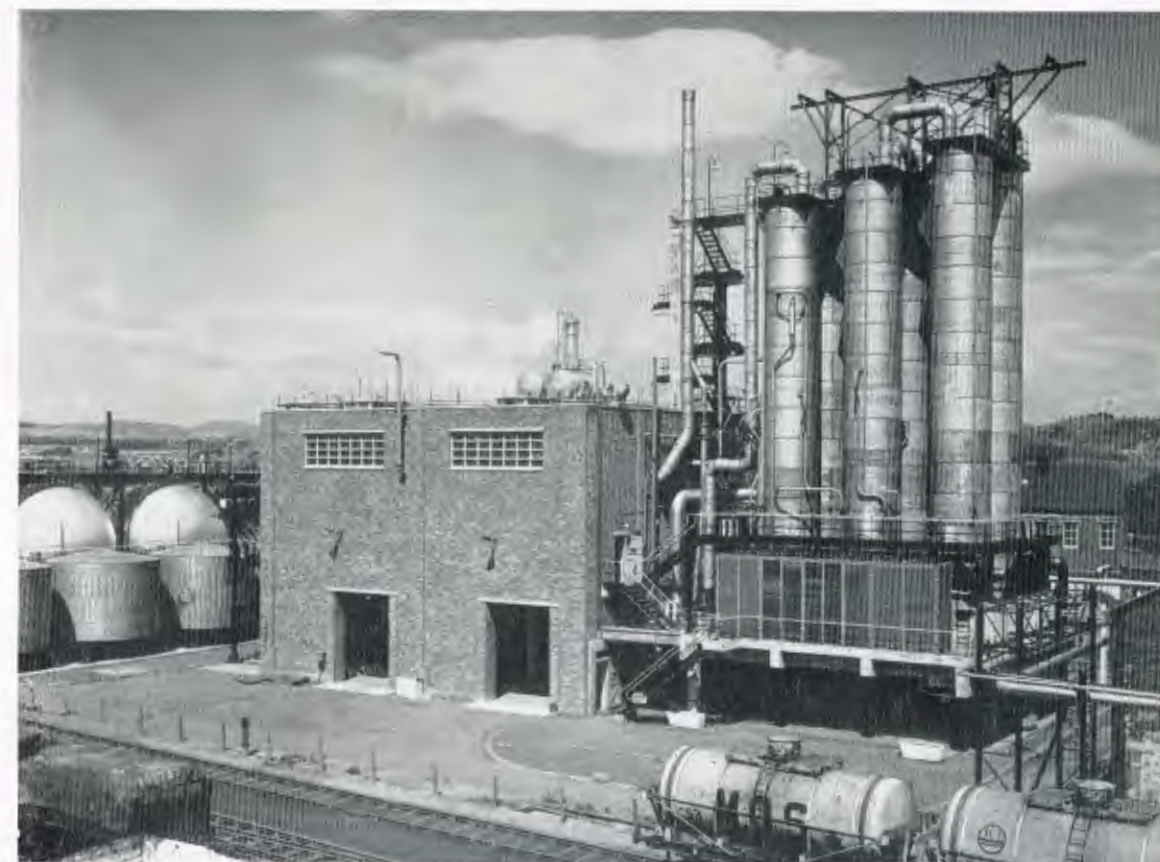
NEWS IN PICTURES

Home and Overseas



Copper for Coventry. Coventry's new cathedral, now nearing completion, will incorporate approximately 60 tons of I.C.I. copper roofing strip. Here contractors are working on the first part of the building to be roofed, the Lady Chapel. Architects of the cathedral are Basil Spence & Partners, the main contractors are John Laing & Son (who kindly supplied this picture), and the roofing contractors are Frederick Braby & Co.

New Nobel plant. Ardeer Factory's new nitric acid plant, showing the 60 ft. high absorption towers, the brick building which houses the compressor and the converters, the nitric acid storage tanks, and two of the three shining spheres for storing liquefied ammonia from Billingham Division's Mossend works. The new plant replaces older methods of nitric acid manufacture



Champions again. For three years running, girls from Ardeer Factory have walked off with the Scottish sprint relay title. Seen at Murrayfield after this year's event are Sandra Marshall, Marion Brown, May Orr and Isabel Bond, with Ann Reilly (*second from left*), who came second in the invitation 660 yards



Diamond wedding. Mr. Frederick Cooper, 81-year-old Billingham pensioner, and his wife recently celebrated their diamond wedding. Among those who came to congratulate them at a party held at the local Darby and Joan Club was Sir Alexander Fleck. Here Mrs. Cooper shows him a telegram from the Queen



Flower show success. Foreman gardener Bill Dale and apprentice David Ball of Alkali Division put a few expert touches to this magnificent begonia plant at Southport Flower Show. For the third time running their group of greenhouse plants won the Helters Trophy



Worm's eye view. Taken from an unusual angle—the steps up the new alkyd resin plant chimney at Paints Division's Stowmarket factory



Competitions—1. Sir George Thomson, president of the British Association, presents a cheque for 50 guineas to Mr. Ian Bunyan of Edinburgh University, the first prize winner in this year's *Endeavour* essay competition. 156 essays were submitted—a new record. On the left is Dr. Trevor Williams, editor of *Endeavour*



Competitions—2. Comedian Terry-Thomas wears the prizewinning design by Mr. Ronald Pescod in the competition sponsored by Lightning Fasteners Ltd. to find a zip-fastened alternative to the traditional masculine waistcoat. Other prizewinning entries below. (See story on page 354.)



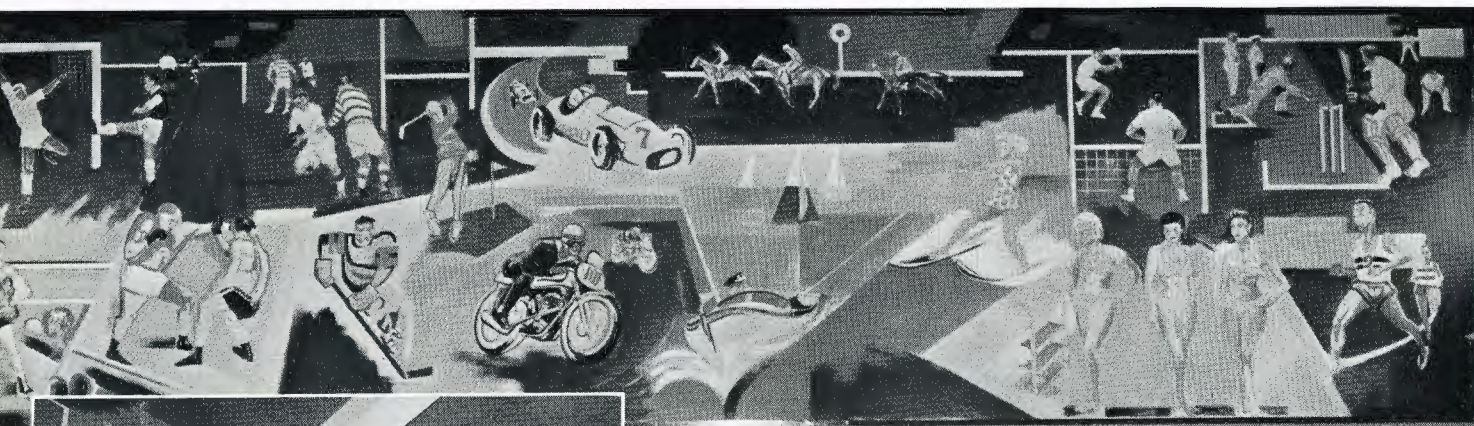
Double trouble. Two sets of twins have been giving "double trouble" to members of Billingham and H.O.C. Division staffs since all four started work in the Billingham messenger service on the same day last May. *Top:* John and David Walton. *Above:* David and Geoffrey Harrison



Visitor from Sweden. Visiting Nobel Division recently, Mr. Nils K. Stahle, legal authority on the Nobel Foundation, examines the agreement between Alfred Nobel and John Downie which led to the formation of the British Dynamite Company. With him are Dr. F. J. Pollock, Dr. W. A. Caldwell and Mr. E. Whitworth



Canned sunshine. The first solar-heated swimming pool in Europe has been installed at a hotel at East Grinstead in Sussex. The elements for the solar heater, housed in the greenhouse-like building, were manufactured by Metals Division. The heater is 34 ft. long and 16 ft. high and incorporates nearly half a ton of copper 'Tube-in-Strip.' The solar heating increases water temperature by 10–20 degrees, depending on weather conditions



Sports mural. The 40 ft. long mural which now decorates the Piccadilly restaurant at Wilton. Boxing, soccer, rugby and golf are among the sports incorporated. *Left:* Artists from Middlesbrough College of Art at work on the mural



Science students from seven European countries, some of the 500 delegates to the recent International Youth Science Fort-night held in London under the jointauspices of the British Association for the Advancement of Science and World Friends, spent two days touring the Slough Works of Paints Division



Hovercraft crew in 'Terylene.' This is Britain's first flying saucer—the SRN1 Hovercraft, built by Saunders-Roe Ltd. for the National Research Development Corporation. The two members of the crew are wearing p.v.c. coated 'Terylene' overalls supplied by Crewsaver Dinghy Equipment Ltd.



Mr. Edgar Fuchs (Alkali Division Technical Department) is the new president of the Institute of Welding. Before the war, as boiler and structural shop manager, he pioneered work on all-welded structures, the results of which were later applied in the fabrication of pontoon sections for the Mulberry Harbour



Return visit. A party of young German footballers who visited Billingham recently ended their stay by playing Synthonia Juniors at the Synthonia stadium, and here team captains Alan Angel (*left*) and Egon Milder exchange souvenirs before the game. The visit was a return for one made to Westphalia last year by a Synthonia party



White for winter is made practicable in this case by the use of washable 'Vynide,' I.C.I. (Hyde)'s product with the look of leather. The coat, lined in black satin and with a cosy black beaver lamb collar, is by Dannimac and costs about £7 19s. 6d. *Right:* Another I.C.I. (Hyde) product, 'Novon' plastic foil, is incorporated in this new safety helmet. The 'Novon' is vacuum formed over a fibreglass shell. It comes in black, white and blue and is on sale from 75s. to 95s. in most cycle shops



Recent arrivals in London are Mr. A. K. Bhattacharjya, Mr. P. E. Narasimhan and Mr. R. Srinivasan, who have been awarded scholarships by I.C.I. (India) Private Ltd., tenable at British universities. Each scholarship, for up to three years advanced technical training, is worth about £600 a year



Blue People

By Ernest Knoblock

Deep in Morocco, beyond the High Atlas Mountains, live the Blue People, so rarely seen by the foreigner. The last of the great nomad tribes ranging across the Sahara, they get their name from the deep blue of their garments, a vegetable dye which rubs off on to the skin and protects against the sun.

IN the South of Morocco, protected by the towering mountain barriers of the Atlas and Anti-Atlas and by an inhospitable Atlantic coast, live the *hommes bleus*, the blue people. They are a Touareg tribe and perhaps the last remaining great nomads to range across the Sahara. Nobody knows their numbers, but there may be about 30,000.

The only possessions of the blue people are their camels, which they sell in the markets of Tindouf, Goulmine and Marrakesh—to buy barley, dates, sugar and tea. Their caravan expeditions take them for many weeks to meagre grazing grounds in the south. The heroic past is now but a memory—a memory of the *rezzou*, the pillage of settlements and caravans, which brought honour and fame. Navigators, shipwrecked on the lonely coast, were captured by these corsairs of the desert and sold into slavery.

The blue people acquired their name from the colour of their skin. The mystery was solved when it was found to be due to the dye of their dress. They wear the *dorra*, a kind of cotton shirt, and the *chèche*, a piece of cotton several yards long which serves as turban, rope, sack, belt and, at night, as pillow. Both are blue, and their colour rubs off on the skin. The dye is said to give remarkable protection against the sun.

The region inhabited by the blue people is one of the hottest in the world, the sun burning down from a cloudless sky in temperatures of up to 150 degrees Fahrenheit. When the *chergui* blows—the hot sandstorm from the south-east—there is nothing for it but to lie crouched on the ground under the folded tent and wait until it has passed.

The visitor to the blue people and their citadel of Goulmine needs a special pass from the Governor of the



Blue men at Goulmine trade and wait after a journey

province. We got ours with the help of a friendly girl secretary in the Governor's office in Agadir. Setting off on the road towards our goal, we soon began to feel the fascination of the desert. Eventually the town of Tiznit rose above the wide horizon, with its long low outline of crenellated red walls set in the midst of nowhere. During the days of the French Protectorate Tiznit was a garrison centre of the Foreign Legion. But the place has now returned to a peaceful state—its enormous empty square dreaming in the heat haze and flies buzzing around the deserted bistro, once the haunt of the legionnaires.

Tiznit is a charming sleepy sun-drenched town, spaciouly built with wide alleys and open spaces. Bridges span waterless canals. Our self-appointed little guide, about ten years old, showed us the way to the famous blue pond, which is indeed a magic sight in this arid country. Wandering on, we came to some old watchtowers of the outer fortifications. We made the somewhat perilous ascent of one of them and were rewarded with a view such as to make a journey of hundreds of miles worth while. The far-flung town with its maze of walls and battlements

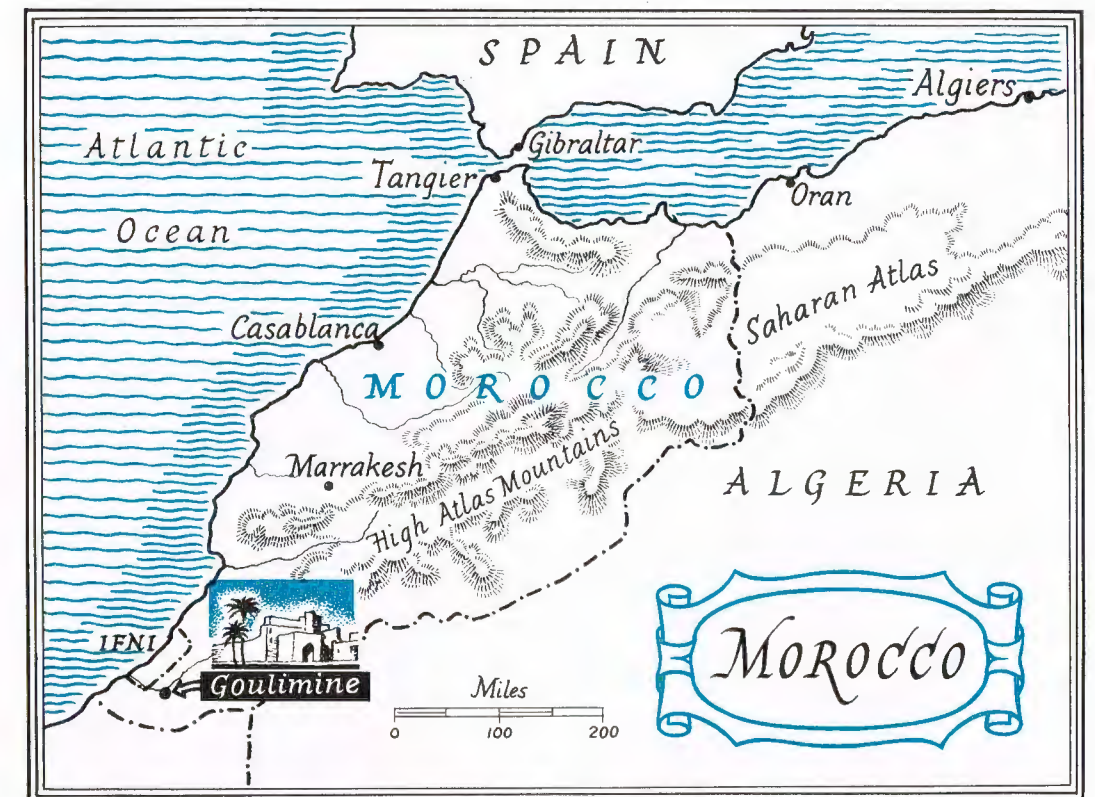
and its graceful palms lay at our feet, smoky mountains rising in the far distance.

Continuing the journey from Tiznit, our progress was barred by a heavy chain across the road. We showed our pass, the chain was lowered, and we drove across it with feelings of elation and some apprehension.

As we approached Goulmine our path crossed from time to time that of one or two blue people on camels riding in a straight line over the vast featureless expanse. The blue people are said to have an unerring instinct of direction. We also met herds of hundreds of black goats drifting across the country, rather like reindeer in the very different setting of the Scandinavian North.

Goulmine we found built round the slopes of a slight hill. The height is crowned with a crumbling fortress, its bright red walls standing out starkly against the harsh blue of the sky. We drove through alleys filled with a slow traffic of humanity, asses, camels and carts, to reach a huge market place surrounded by arcaded shops.

Merchants' tents were pitched in long rows for the *souk*, the weekly market. Food is the main merchandise



on sale, but there are also tailors, drapers, pottery sellers and jewellers. At a baker's shop we bought a large round white loaf of bread which had no taste at all.

Much activity was going on. Camels and asses were being loaded and unloaded. Shoppers drifted through markets and alleys in their long blue robes, frequently two men holding hands, as seems the custom. But many of the crowd preferred to escape the battering sun and take their ease sitting or lying in the shade of the arcades.

At certain times Goulimine is the scene of a famous camel market, when it is crowded with thousands of these haughty animals. The camel can work four days without water, but at the watering place it drinks in one day up to a hundred litres. It is capable of carrying a load of 150 kilos and can march 20-30 miles a day at a man's walking pace.

Camel's Milk for Visitors

Camel's milk is the staple food of the blue people when the supply of grain and dates runs out. It is offered in obedience to the laws of hospitality to the stranger who approaches the tent.

The favourite refreshment of the blue people, as of all Moroccans, is mint tea. It is not made from mint, but from green tea with a sprig of mint added and heavily sweetened. Great quantities of tea are drunk when water is at hand.

An old proverb says: "One glass of tea, that is nothing; two is poor; three, the rule; four, extravagant; five are forbidden (unlucky number); six, better than three."

Veil Dance greets Caravanners

On occasions, such as the return of a caravan, the women dance the *ghedra*, the origin of which goes back to the prehistoric past. The dancers are elaborately coiffured with ornaments, beads and jewels in their hair, and appear in heavy long garments, their faces veiled. The dance is performed kneeling, because the nomad's tent is too low for standing upright. To the exciting rhythm of drum and chanting each woman in turn takes the floor, jerking the upper part of her body in staccato movements. As the fever of the dance rises, the veil and one garment after another slides from the dancer, leaving her naked.

Our return journey took us over the Tizi-n-Test pass of the snow-covered High Atlas to Marrakesh. It was quite a hair-raising experience for the unseasoned motorist to drive round the short hairpin bends of the rough track just wide enough to take one car and covered with loose stones—a towering wall of rock on one side and a sheer drop on the other. The heat in Marrakesh was so terrific that the cheese we were carrying for our meal turned to oil and ran down inside the car.

The High Atlas Mountains as seen on the ascent from Marrakesh

"...Suddenly she ceased to be the queen of the jungle taking her morning stroll..."

The Kill

By Robin Todhunter

Rarely is the drama of jungle law enacted before a camera. In three remarkable photographs Robin Todhunter has captured two lionesses stalking a warthog, the kill, and the subsequent fight over the spoil.



THE Wankie Game Reserve is in Rhodesia about 150 miles east of Livingstone. The entrance is marked by a skull and crossbones, under which is written "Stay on the road. Stay in your car. Keep engine running." You have to clock in with the Warden at the gate and are instructed that you must reach the camp at the far end of the Reserve before nightfall. If you have not arrived, they send out a search party to make sure you haven't been eaten by a lion or trampled on by an elephant.

It was as hot as the hobs of hell. I couldn't rest my arm on the metal of the car. We had been told that we would probably see elephant but we would be lucky to see lion, but of course it was lion that we wanted to see above all.

We drove slowly down the track and soon began to see bushbuck, impala, roan antelope, warthog and kudu in fair numbers. After half an hour or so we saw an elephant, but so far off that even through powerful glasses we could only be sure he was an elephant because he swished his tail. We drove on. More kudu and impala and warthog. The heat and glare increased, and I found myself dozing, unable to keep my eyes open.

Suddenly I was jerked into wakefulness as Hector jammed his foot on the brake and said "Look—lion!"

There, about 50 yards away on our port bow, was a magnificent lioness. Supremely contemptuous of the car and its occupants, glorious in her supple strength, she walked slowly towards the road, crossing it about 15 yards in front of us. By great good fortune there was no bush and hardly any undergrowth just at this point.

As she crossed, she turned left-handed up the road and suddenly ceased to be the queen of the jungle taking her morning stroll. Her pace slowed. Her head sank down in her shoulders. Her tail waved slowly from side to side. She became in an instant the professional killer.

She had seen a young warthog rooting in the earth about 25 yards away from her and just off the road. When she got within 20 yards, the warthog turned and the lion sank down, head between paws on the ground, utterly motionless except for the twitching tail.

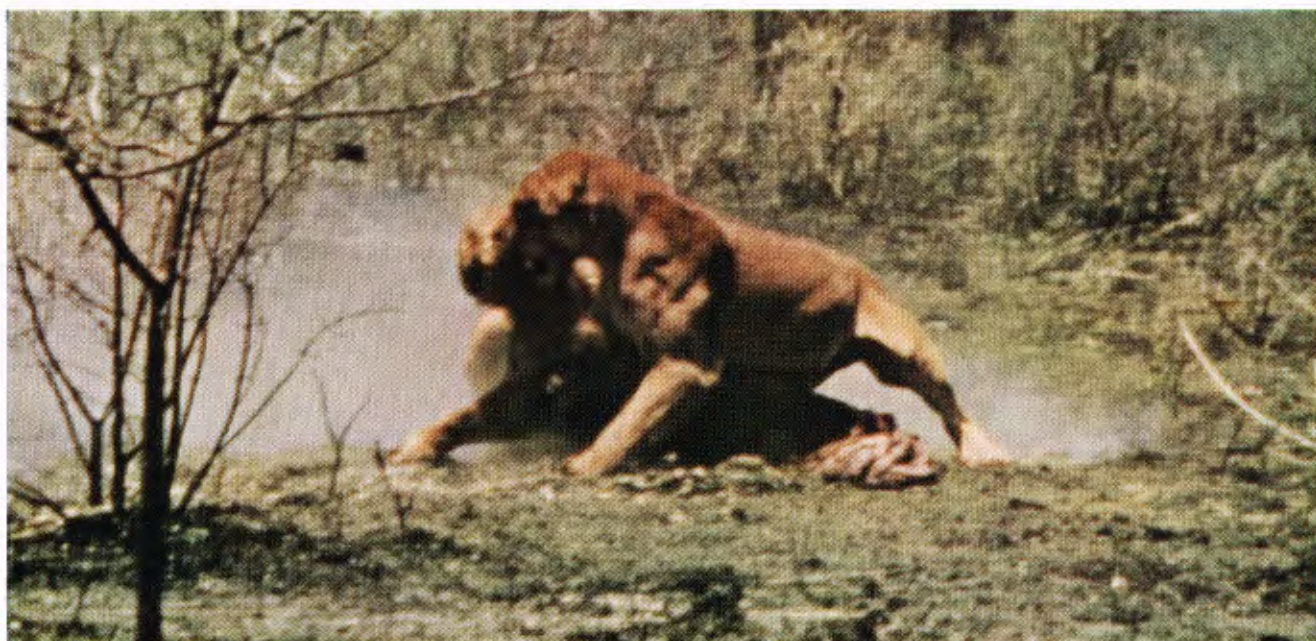
Meanwhile her mate, another lioness, was standing at gaze in the grass on the left-hand side of the road, watching the proceedings. In spite of the instructions Hector had stopped the engine, and in the burning



STALK. The lioness has seen the warthog. Her pace slowed, her head sinks.



KILL. The lioness has struck, and her mate rips the warthog's belly.



FIGHT. Both lionesses grabbed the same piece. Neither would let go, so they fought.

stillness we held our breath. The tension was unbearable. We could have saved the victim with a warning cry, but all thought of mercy was submerged in our desire to see the finish of the drama.

The warthog, unaware that his hour had come, browsed slowly towards us, then found a particularly tempting morsel and turned away again the better to root it out. As soon as he was happily engaged, the lion rose and moved forward, step by stealthy step.

When she got within 10 yards, her walk turned into a loping trot—calm, unhurried, almost blasé, the master killer at work.

Then, when she was within a few yards, she shed the mask of indifference. Transformed in a flash from a sinuous velvety creature into a thunderbolt of muscle and sinew, she streaked through the air and landed diagonally across the warthog's back, knocking it over and seizing its throat in her merciless jaws.

The warthog had no time even to squeal, and pinned thus in the embrace of the lion's forepaws, its throat in a steel trap, it could only kick convulsively.

As the lion struck, her mate streaked across to the kill. Seeing that her assistance was not needed, she wasted no time but proceeded to rip open its belly with her razor-sharp claws and sink her teeth in its smoking intestines.

Slowly the warthog's jerks died down, but the killer did not relax her grip until the last spark of life was extinguished, even though her mate was devouring all the choicest morsels. Then she too seemed to

put her head almost inside the carcass. After ten minutes of this they had satisfied their first craving, and they lay, their muzzles covered in blood, blinking in the sunlight like a pair of contented cats.

But this peace was rudely shattered soon after they started feeding again. A dispute arose over who was to have what. They both grabbed at the same piece. Neither would let go. Neither could afford to relax her grip for an instant. So there they lay, heads together, muscles straining, uttering muffled growls as best they could. For at least ten minutes this tug of war continued. At last they could stand it no longer, and one of them let go her grip and with a fearful roar went for the other. For a short space of time there was a titanic rough-and-tumble, but it was soon over and they settled down again on the carcass, apparently at peace once more.

By now they were gorged, and soon they were half asleep, unable to eat any more. We watched them for a while, and then felt, reluctantly, that we had to move on. We found it difficult to believe that we should have had the good fortune to enjoy a seat in the stalls at a spectacle which is hardly ever seen, even by people who spend their lives among wild animals.

If the kill had been an impala or a kudu or a zebra it would have been too cruel to bear, but the fact that it was a humble warthog made it just bearable. Just why the life of this hideous and rather ridiculous little monster should seem of less value than that of his beautiful sister the impala I don't know!

October IN THE GARDEN

PLANTING TIME AGAIN

By PERCY THROWER

ONCE again planting time, and this time for the plants we look forward to seeing coming into flower in the spring. In my part of the country wallflowers and forget-me-nots come safely through most winters; but this is not so in all districts, and particularly industrial areas. Those that can be relied on in areas such as these are tulips, daffodils, narcissi, hyacinths and other spring-flowering bulbs—they are tucked safely away below the soil for most of the winter and are unaffected by smoke and fumes. We want good planting weather; nothing is worse than to put in plants at this time of year when the soil is wet and sticky. Now that the clocks have been put back there is less time for gardening and we must make the best of each fine week-end.

Firstly there is the job of clearing away the summer flowering plants. These were not as bright and colourful as we had hoped they would be during September because of so much rain. Those to be saved for next year, if not already inside, must be brought in before they are completely ruined by frost, and the others we are not intending to save will help to make good compost.

The soil must be turned over and broken up, and if manure is available I prefer to dig it into the beds

and borders now rather than in the spring. In the towns manure is a very scarce commodity and it means finding substitutes, but it is just as important to maintain the humus content of the soil in the flower beds as it is in the vegetable garden. Substitutes have to be used, and these can be compost, peat or even hop manure.

I believe in using bone meal at this time of year too, because it is slow in breaking down into soluble plant food, and while some will be available to the plants when growth begins in the spring, some will be available for next summer's plants too. A large handful for approximately each square yard of the bed or border is quite a liberal dressing. It can be sprinkled along each trench as the digging is done or sprinkled over the surface after digging. Before planting, the soil must be made really firm by treading, but this must only be done if the soil is not too wet and sticky. It may be that the soil will not be fit for planting for a week or two, but if the digging is done in readiness it will not take long to prepare it for planting when the weather and soil conditions are ideal, and we hope they soon will be.

Many people will have to buy their plants. Apart from wallflowers and forget-me-nots, look for

polyanthus, aubretia, sweet williams, Canterbury bells; and for planting between and round shrubs a few plants of the new Excelsior hybrid foxgloves. Wallflower and sweet william plants should be bushy and with plenty of root; the others should have plenty of good fibrous root too, and the more soil there is on the roots the better. Should you have plants of your own in the garden, lift them very carefully with the garden fork, keeping as much soil round the roots as possible. Be sure to make each hole large enough to take the ball of soil and root without cramping and press each one in really firmly.

Firm planting is essential at this time of year, otherwise the plants may be loosened by wind, rain or frost. Each one must be far enough away from its neighbour to allow for growing and developing. Allow six to nine inches for the small plants, and nine to fifteen inches between for the larger ones. Bulbs and corms of all the spring-flowering kinds can be planted now, and these will need to be planted from three to five inches deep, depending of course on their size. Daffodils and narcissi can be planted in the grass too, between and around shrubs and trees, and these must be at least five inches deep.

BURGUNDY HOLDS ITS OWN

By F. R. Bradbury

This is not perhaps the Burgundy you first thought of. In fact, the Burgundy of this article is the original name of a fungicide, with a fascinating development story. It plays a big part in keeping healthy the plants from which so many of our everyday foods come—bananas, cocoa, coffee, tea and potatoes.

THIS is a story with a difference. It is a story of an old product making good and not, as is so often the case, the story of a wizard new product sweeping everything before it.

'Perenox' is a copper fungicide made by the General Chemicals Division of I.C.I. There are many chemicals which are fungicides—that is, compounds that kill or otherwise control the growth of moulds and mildews—but copper is one of the oldest.

There is a certain charm in the story of how copper first became used as a practical fungicide. It all happened in a little village in Bordeaux called Médoc, well known to claret drinkers. The French vine grower was at that time suffering havoc from the attack of downy mildew which had come from America. A biologist by the name of Millardet was commissioned by the French Government to investigate the causes of this disease, and it was in Médoc that he observed certain vines flourishing along the roadside though elsewhere they had been stripped of their leaves by the disease. *He also noticed that the healthy plants had been daubed with a mixture of lime and copper sulphate. This was to discourage passers-by from picking the fruit for fear of poison.*

Millardet followed up this slender clue and in 1885 announced the successful use of a lime/copper sulphate mixture to control the downy mildew of vines. This mixture he called Bordeaux mixture, from the name of the locality in which it originated.

Later a modification of Bordeaux mixture came into use, this time a mixture of copper sulphate and soda ash, named Burgundy mixture.

This is where I.C.I. comes into the picture as suppliers of soda crystals. The Alkali Division at Northwich did quite a trade in soda crystals for Burgundy mixture—especially to Ireland, where Burgundy mixture was used extensively for the protection of the potato crop from the fungus causing blight. It was nice work while it lasted.

Challenge No. 1 came in the early '30s. Ready-mixed Burgundy pastes then began to appear. They saved the farmer all the trouble of mixing the copper sulphate with

the soda crystals and so had an obvious appeal. It became clear that I.C.I. sales of soda crystals were endangered by this new development, and so work on finding a new formulation began in the Research Department at Widnes.

Eventually 'Perenox,' a cuprous oxide powder, emerged as the answer, and a 'Perenox' plant at Pilkington-Sullivan Works came into action in 1940. 'Perenox' was made according to the original formula at Pilkington-Sullivan Works for almost the whole of the following twenty years.

Challenge No. 2 emerged in the 1950s. The reason? *Because a customer complained that 'Perenox' had bored some large holes in his spraying apparatus!*

You may ask why it took twenty years to find out that this product was capable of boring holes in spraying equipment. The explanation lies in the advances made in the design of spraying machinery. Until recent years almost all fungicide spraying was done with a lot of water. For instance, the 2 lb. of 'Perenox' needed to treat an acre of bananas was mixed with 200 gallons of water to make the spray. 'Perenox' contains chlorides, but they were not strong enough to cause serious damage when diluted to this extent.

In the 1950s, however, engineers discovered that by spraying under pressure with fine atomising nozzles fungicide sprays could be broken down into very fine droplets, rather like mist, so that an acre could be covered with as little as two gallons of water. Since we still need 2 lb. of 'Perenox' per acre you can see that the net result of this change has been to increase a hundredfold the concentration of chloride in the spray fluids. This change in spraying techniques dictated the change in the composition of 'Perenox.' A new composition was designed, which kept down to a safe level the undesirable chlorides.

Low volume spraying has brought other changes too. Whereas in high volume spraying the target was very thoroughly wetted by sheer bulk of water, under the new conditions the spray is very finely subdivided into minute droplets which are scattered over the surface of the crop to be sprayed and by no means can bring about complete wetting.

In order to make the fungicide as effective as possible it is clearly desirable to achieve two things. The first is to make each droplet spread as much as possible so that the fungicide covers as large an area as may be of the leaf surface. The second is to ensure that, having got the fungicide on, it stays on. Therefore we have to incorporate in 'Perenox' designed for low volume spraying a wetter which has the property of making each droplet spread out and cover as much leaf surface as possible; and a sticker which will make the spray stay on better after rain.

Of course, one must not overdo it. Too much wetter will facilitate spreading, but it will also facilitate washing just like the detergent at home. So a nice balance has to be found between the amount of wetter required to give spreading and the amount which would cause detergent action.

The study of wetters and stickers is, in fact, rather more an art than a science and very little is known about what makes a good sticker, so that the choice becomes very much a matter of trial and error. The selection of good wetters and stickers and the measurement of the rainfastness of products demands laboratory tests on the actual plants to which the fungicide is to be applied. *In Widnes Laboratory there is a flourishing colony of banana trees which are used in experiments.*

As a result of all these improvements 'Perenox' is today widely used to prevent or control the attack of fungus on a number of crops, all of which are familiar household things: bananas, cocoa, coffee, tea and potatoes—there are others, but these five are the principal ones.

The use on bananas is perhaps the most important. Copper is applied to banana leaves to control the fungus *Cercospora muscae*, which causes leaf spot disease. It attacks the leaves, not the fruit. The significance of the attack is, of course, that by causing the leaves to wither and die back the fruit is deprived of nourishment, and unsaleable unripened fruit—known to the farmer as "green ripe"—results.

Challenge No. 3 came about five years ago. This was a petroleum oil fraction. The usefulness of oil sprayed from the air for control of leaf spot of bananas was first demonstrated in the West Indies. It was easy to apply, there were no corrosion problems, and the coverage obtained by the fine mist delivered by the aircraft was



A field trial unit in the Cameroons, West Africa

most impressive. This meant that copper sprays temporarily lost their market in the banana-growing industry.

Happily for 'Perenox,' however, it was only a temporary setback. It was later discovered that, while the oil functioned admirably during normal years, it could be severely damaging in very dry seasons through causing burning up of leaves—the very thing the fungicide is put on to prevent. The recognition of this danger has caused a rapid return to the use of copper for banana spraying, with the result that 'Perenox' is today in greater demand than ever. Increasingly it is applied by aeroplane, a technique which is both quick and does the minimum damage.

At the beginning of this article we said that this was a story with a difference. The difference is that the old and well-established fungicide copper—cuprous oxide—has kept up with the times, albeit with a face lift.

The inorganics possess one great advantage over the newcomers. They are much less volatile and chemically more stable, so the deposits have a longer effective life. Until an organic fungicide is found which is as chemically stable, as persistent, as cheap and as safe as copper, 'Perenox' will continue to hold its own.

THE ULTIMATE IN SHORT DELAY DETONATORS

By F. P. Harrison

Nobel Division is today marketing detonators which go off with almost incredible accuracy—in fact, with a delay of as little as a twenty-five thousandth of a second between one batch of detonators and another. One of the advantages of blasting with these minute delays between explosions is that potentially dangerous ground vibrations are greatly reduced. Another gain is better fragmentation.

SINCE 1862, when Alfred Nobel first manufactured nitroglycerine on a commercial scale, the advance of explosives technology has tended to be a steady process highlighted at intervals by some major development.

The delay detonator can be looked upon as one of these highlights. The average rate of progress during the drive of the Simplon Tunnel, opened in 1906, was 96 ft. per week. Today, similar tunnels, using delay detonators, progress at 300 ft. per week. This improvement is, of course, partly attributable to the great strides in mechanical equipment, but delay detonator blasting can certainly take a major part of the credit.

In commercial blasting operations, whether civil engineering, stone quarrying or demolition, it is the practice to drill shotholes in order that individual explosive charges may be strategically placed to obtain maximum effect from minimum charge. Explosives are supplied in the form of cylindrical cartridges varying in diameter from $\frac{7}{8}$ in. to 8 in. to suit all shothole sizes.

High explosives require an intense shock wave to be set up within them to make them detonate. They do not, as is sometimes the popular belief, explode when a lighted match is applied.

Electric Detonators

The shock wave is commonly provided by the electric detonator, which basically consists of a small copper or aluminium tube into which has been loaded about a gramme of highly sensitive initiating explosive. In the neck of the tube is fitted something which resembles a match head, in which is embedded a thin platinum wire. The detonator is fitted with copper leading wires; and

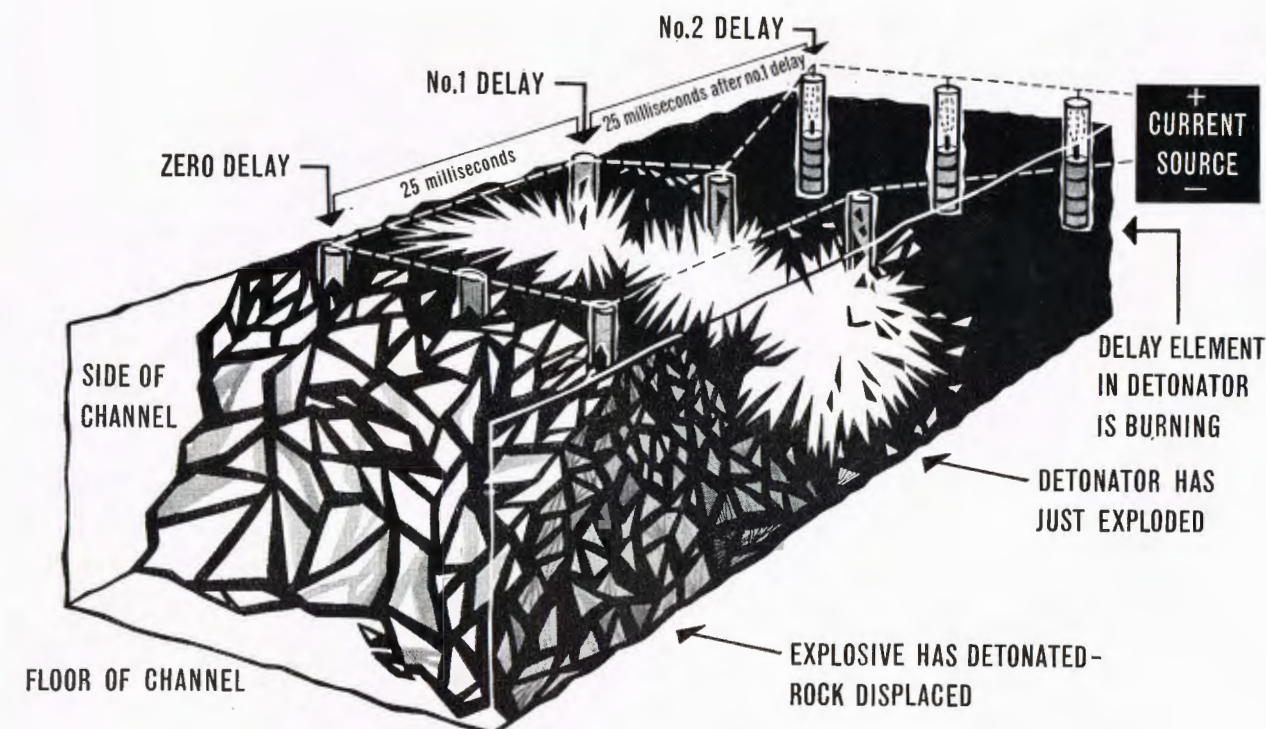
when current is passed through them the platinum wire heats up, igniting the match head, which in turn ignites the initiating explosive within the tube, thus exploding the detonator. In practice the detonator is embedded in one of the cartridges of explosive making up the charge in a shothole.

A number of charges—say 100 individual charges, each primed with a detonator—may be coupled together in series and fired at one go. A large instantaneous blast is thus produced.

Firing in Sequence

As the use of high explosives developed, so the need became evident for some means of firing shots in a pre-determined sequence. In blasting operations it is always advisable to arrange for shots to blast towards a “free face.” In the early days, in order to achieve some sort of sequence and to ensure that a shot blasted right up to the free face established by a previous shot, different lengths of fuse were used to initiate the charges; but obviously a method such as this was somewhat limited, and the need for something better led to the development of the delay detonator.

The delay detonator differs from an ordinary electric detonator in that a delay element is fitted in the detonator tube between the match head and the explosive charge in the base of the detonator. Thus, when the current is applied, the match head ignites the delay element, which burns for a predetermined time before it in turn ignites the explosive charge of the detonator. When a group of shotholes are to be fired, it is thus possible to couple all the detonators together and fire them at one go. But the shots will explode in a sequence determined by the delay



period of the detonator used in each individual shothole. A plastic tag is attached to one of the leading wires of each delay detonator indicating the delay period.

For many years the delay period between consecutively numbered delay detonators was one second; but later blasting experience showed that this delay could be reduced, and a series of detonators with half-second delay intervals was introduced and is still in use, particularly in tunnelling work.

More recently the ultimate in delay detonator design has been achieved, i.e. the short delay detonator. After much research and development there are now delay elements for detonators with a delay period of only twenty-five milliseconds between consecutively numbered detonators. These short delay detonators, now widely used, offer all the advantages of the normal delay detonator plus several additional advantages.

Whenever blasting is carried out at or under ground level, vibrations are set up in the ground. In most cases these vibrations are so small that they can be detected only by special instruments similar to those employed in the measurement of earthquake tremors. If, however, the explosive charges are very heavy, the vibrations can be intense enough to damage nearby property.

This fact is well known to users of explosives. Often the scale of blasting in some quarry or public works operation has had to be uneconomically low in order to keep ground vibrations down to an acceptable level.

However, it has been found that a series of shots, each charged with two-thirds of the amount of explosive permissible in an instantaneous blast, may be fired using consecutive short delay detonators between each shot without any increase in ground vibrations. This means that a much larger total charge can be fired in any round and yet not cause damage. Alternatively, short delay blasting can be used to reduce ground vibrations. Thus the short delay detonator has proved to be a very valuable tool for the quarry owner or civil engineer who has to carry out blasting operations near property.

Invariably when rock is blasted in a quarry or public works excavation the size of the blasted rock is of great importance. It must be broken up to a size suitable for the excavators to handle. To achieve good fragmentation the quarry owner or civil engineer may sometimes use excessively large explosive charges or may even resort to secondary blasting, i.e. the blasting of individual large stones after the main blast has been fired.

Today good fragmentation can be achieved much more easily by the use of short delay detonators. The principle is that, when the rock blasted by the charge on No. 1 short delay is still in mid-air, No. 2 short delay explodes and the rock from this collides in mid-air with the rock from No. 1 short delay—and so on through the whole range of short delays employed. So the rock is broken up not only by the explosive but also by collisions between rocks in mid-air.

People and events . . .

I.C.I. to make Polypropylene Fibre

A PATENT licence agreement for the exclusive production in the United Kingdom of staple fibre, filament yarns and textile monofilaments from polypropylene was signed in Zürich on 30th August between I.C.I. and Montecatini of Milan.

I.C.I. is already licensed by Montecatini to produce polypropylene for use as a plastic, and a plant at Wilton for the production of this new polymer under the I.C.I. trade name 'Propathene' is nearing completion.

Polypropylene fibres are the outcome of the researches of the Italian scientist, Professor Giulio Natta, and of Montecatini, and the new fibres are currently being produced in Italy by Polymer S.A., a subsidiary of Montecatini, under the trade name 'Meraklon.'

Polypropylene fibres, alone or in combination with other textile fibres, are expected to find uses in, for example, the clothing, carpet, household textile, rope and cordage industries.

Titanium Price Cuts

ON the eve of last month's Farnborough air show, Metals Division announced further big reductions in the price of titanium—the one-time "millionaire" metal. From 1st November all I.C.I. wrought titanium products will be 10-15% cheaper. The new price for I.C.I. titanium sheet, which only six years ago cost about £8 a lb., is 73s. a lb. Rod, which has always been cheaper because it is easier to make, is down to 56s. a lb. This is the fifth reduction since Metals Division began marketing titanium products in 1954.

Lost Colony

NORTH Carolina, where Fiber Industries Inc. has set up its polyester

* * *

fibre factory at Shelby (see page 328), has strong historical ties with Britain. It was there nearly 400 years ago that the first English attempt at colonisation in North America was made.

In 1587, only three years after Sir Walter Raleigh had sent his first expedition to the New World, three shiploads of emigrants, since famous to history as the "lost colony," settled on Roanoke Island off the coast of what is now North Carolina, and the first English child to be born in America (in August 1587) was Virginia Dare, a granddaughter of the governor, John White. White shortly afterwards returned to England to arrange for reinforcements and supplies, and owing to the Spanish war—1588 was Armada year—was prevented from getting a ship back until 1589. When he did finally return it was to find that the colonists had vanished without trace, providing history with one of its major mysteries.

Our Partners in F.I.I.

THE Celanese Corporation of America, our partner in Fiber Industries Inc., was founded in 1918 under the name American Celanese and Chemical Manufacturing Co. The prime mover was Mr. Camille Dreyfus, who had formerly been associated with his brother, Mr. Henry Dreyfus, in the British Celanese Co. The present title of the American company was adopted in 1927 when they acquired control of the Celluloid Corporation.

Celanese is now one of the major fibre-producing concerns in the United States, and in addition its activities cover a wide range of products for the plastics and chemical fields. Organised in four divisions—Textiles, Plastics, Polychem and Chemicals—Celanese manufactures acetate, triacetate, and viscose fibres under the names Celanorm, Fortisan, Arnel, etc., in the Textile Division, and a wide range of plastic products from acetate, polyethylene, polyester resins, etc., in the Plastics Division. The other two divisions manufacture many of the raw materials required for plastics and fibres and other products for outside sales.

Celanese has many affiliated companies in overseas territories and particular interests in Canada, Mexico, Colombia and Venezuela.

Olympic Transport Problem

THE British Canoe Union, who made all the Olympic arrangements for the British canoe team, solved a packaging problem by using polythene film from British Visqueen. They had to find a simple and inexpensive method of transporting the team's boats all the way to Rome and back by road—some 2300 miles—which would, however, ensure complete protection from such hazards as the weather, dust and insects.

The normal means of packing these fragile moulded plywood craft is to place each boat inside a wooden crate fitted with special cushioning to prevent movement. Time, weight and cost factors put this method out of the question.

It was decided instead to sheath

each of the canoes individually in 'Visqueen' polythene film and then to secure all the boats with webbing by slinging them on a two-tiered, specially constructed metal framework which was mounted on the roof of a miniature bus.

In spite of high winds in France and uneven roads in Italy, all the boats travelled well on top of the bus and arrived safely at their destination in first-class condition.

£2 Million Copper Project

IMPERIAL Chemical Industries of Australia and New Zealand and Yorkshire Imperial Metals (in which I.C.I. is an equal partner with the Yorkshire Copper Works) are joining forces in a £2 million scheme to manufacture copper and copper alloy sheet, strip and tube in New Zealand. A new company is to be formed in New Zealand to conduct manufacturing operations, and 25% of the equity capital of this new company will be offered for subscription by the New Zealand public. The plant is likely to be in the Auckland area, and production is expected to begin in about 18 months.

Mixed while you wait

HOME decorators are getting more choosy. Higher standards of living, more leisure and heavy advertising, say the experts, have all contributed to our increasing consciousness of colour in the home, and the manufacturer most likely to go ahead in the present paint market is the one who can offer the best range of right colours. For a growing number of people the ready-mixed range of two dozen colours or so is not enough.

Paints Division's answer to this is the 'Matchmaker,' a tinting machine which will produce, on the spot, 250 colours from only two base paints and nine tinters, by permutations which compare favourably with any football pools system.

The 'Matchmaker' has been designed by Paints Division's own engineers. Pastel shades and fuller colours can be produced in 'Dulux' gloss and eggshell finishes, 'Dulite'



Boats belonging to the British canoe team wrapped in 'Visqueen' (see Olympic Transport Problem).

emulsion paint and 'Dulux' undercoat, all from the same tinter. Once the customer has made up his mind, the whole operation for the retailer is simple. The formula card gives the dial setting instructions, the tinter is injected into the base paint—then a shake, and it's ready.



The 'Matchmaker' will be going into selected stockists at the end of the year, and this will be supported by strong local advertising.

Pen Pals

WHEN you wait for 30 years to meet someone there is a very real danger of being disappointed when the

moment arrives. But Mr. Alexander Beggs (Ardeer Blasting Dept.), who travelled to Germany recently to meet the man he began corresponding with 30 years ago, found his pen friend, Herr Horst Augst, just as he had imagined him.

The two men began corresponding in the early thirties and continued to exchange letters regularly until the war clamped down on all correspondence between this country and Germany. Mr. Beggs heard nothing more until 1944, when a letter reached him from an army padre informing him that his pen friend, now a paratroop officer, was a prisoner of war in Egypt. No direct exchange of letters was possible while the war was on, but when Herr Augst returned to Germany in 1945 the correspondence started up again.

* * *

Not until this year was it possible for the two men to meet, and they did so at Augsburg Station. There Herr Augst was waiting to drive Mr. Beggs to the small Bavarian town of Ludvigsmoos, where he has now made his home, since Dresden, where he was born, is in East Germany.

As a souvenir of this very special holiday Mr. Beggs brought home with him a tape recording of the entire Augst family playing various musical instruments, led by father Horst on the zither. He left his own mark in Bavaria—a six foot high mural of a Scots Guards piper executed on an outside wall of Herr Augst's house. It pairs with a picture of St. Christopher already painted on another wall by a local artist.

Chemistry and the "Good Life"

THE contribution made by the chemist and the chemical industry to the "good life" was emphasised by **Dr. James Taylor**, Main Board Director for Nobel and Metals Divisions, in his presidential address to the Chemistry Section of the British Association at Cardiff last month.

"We travel along the M1 at 100 miles per hour or more, in fibreglass-polyester motor cars, propelled by high-octane fuels, listening to radio sets transistorised with high-purity germanium and silicon, firmly but gently supported on polyurethane foams, and, if we are lucky, accompanied by our ladies clad in acrylonitrile and polyethylene-terephthalate and decorated by some of the more sophisticated products of the dyestuffs organic chemists. We eat our sandwiches from polyethylene packs with polymethylmethacrylate dentures."

"We may laugh at this extravagance," said Dr. Taylor, "and claim that we are really no better off for all these; that they are no basis for a cultured life. Personally, I beg leave to doubt. I cannot see why a Persian carpet is considered to be a work of art and evidence of the good taste of the owner, whereas a nylon dress or a p.v.c. fabric is merely the expression of a 'false need'."

Men in the Money

TWO Plastics Division men have recently hit the jackpot under the Company's Suggestion Scheme.

The larger award was won by **Mr. E. Summerton**, a plate polishing machine operator at Hillhouse Factory. He

netted £204 for two suggestions. The plates Mr. Summerton's machine polishes are used in the manufacture of 'Darvic' plastic sheet. His first idea was for a special adaptation of the machine to remove the small dimples on the polished surface of the plate, sometimes caused during pressing operations. Previously the plates had to be sent to Sheffield for re-rolling when this happened. His other suggestion cuts down the time spent on repolishing plates scratched or stained during processing.

Mr. Summerton has submitted nine previous suggestions, bringing in a total of £31. He is putting his latest award towards a car.

The other man in the money is **Mr. Terry Williams**, who works on the 'Melinex' Plant at Welwyn. While



Mr. Summerton Mr. Williams

working on a machine which winds the 'Melinex' film on to a roll, he noticed that the brass clutches used on the machine wore easily and that the consequent play in the roll caused damaged edges on the film. To him the solution seemed simple—fit nylon clutches. He put forward his idea, and it brought him in £120.

Part of Mr. Williams' prize money has been spent on a refrigerator; the rest has gone towards a memorable holiday for his family.

"Third" Garment Competition

HERE is that rare event—a fashion item for the men. Lightning Fasteners Ltd., together with the *Tailor and Cutter* magazine, recently sponsored a competition to find a comfortable contemporary alternative to the traditional masculine waistcoat. It could be for day or evening wear,

the only condition being that it must do up with a zip fastener.

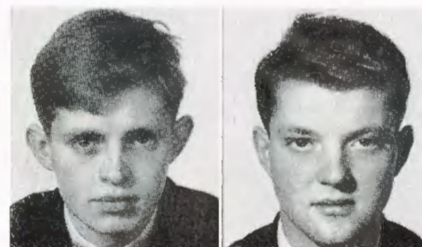
Over 50 entries were sent in. The prizewinning design, chosen by a panel of judges headed by comedian Terry-Thomas, was by Mr. Ronald Pescod of Adeney and Boutroy of 16 Sackville Street, London, W.1. He receives £100.

His design is a cross between a waistcoat and a shirt. It combines a waistcoat front with a shirt collar, set-in sleeves and linked cuffs, and in place of the usual row of buttons it has a 'Lightning' zip which can be quickly and easily fastened and is tucked under a lap-over front. Mr. Pescod originally made up his vest jacket in white piqué for evening wear with a black or white tie (see our picture of Terry-Thomas on page 336), but for the press show and prize presentation it was also on view in tattersall check.

One of the runners-up, which both get £25 prizes, is similar in style to the winning design, but in brocade and showing the back and sleeves in a contrasting fabric. The other is based on the traditional waistcoat style with a 'Lightning' fastener at the front instead of buttons.

Manx Marathon

Peter Hedley, a 21-year-old Billingham Division lab assistant, was one of 112 riders who qualified to start in the Manx Junior Grand Prix in the Isle of Man on 7th September and was one of the 62 competitors still in the race at the end of the six-lap, 226-mile course. He was awarded a finisher's plaque, and but for mechanical troubles which robbed him of the use of his rev counter in the second lap, his third gear in the next lap, and his front brake in the fourth lap, he might well have won one of the awards



Mr. Hedley Mr. Beck

A New Job

Not everyone who retires is happy with the new freedom he gains. Here Mr. T. I. Kelley, formerly a representative in the Chemicals Department of the London Sales Office, recounts his own experience which led to him tackling a new job at over 60.

NOT many of my readers will have reached the age of retirement, but those who have, and in whose footsteps I have followed, will understand how different life can become.

New freedom creates a variety of reactions for pensioners under 65. Some want that little cottage or a bungalow by the sea, others look forward to devoting more time to hobbies neglected in the past. Then there is the person who likes the idea of taking things easy. Life is no longer ruled by train or bus timetables, there is also time for that second cup of tea after a late breakfast, and a leisurely reading of the morning paper. A gentle walk to the club, where matters of "this and that" can be discussed, a light lunch followed by a siesta or possibly a visit to the cinema. So the day passes, as do the following and the following. Nothing of very real interest happens with the exception of that important weekly visit to the Pensions/Unemployment Office,

operating under the Crown, to collect one's winnings!

A few months passed, and a gradual feeling of frustration followed—my girth measurement increased, as did my feeling of lethargy. I was spending money I could ill afford; matters of "this and that" began to lose their appeal. I began to feel apprehensive in a curious sort of way: was I losing my grip, was my brain becoming atrophied—my interest in current affairs diminishing—in fact, was I going to seed? I decided I must do something. I found myself talking to friends; everyone agreed that it would be an excellent thing to do something, but no one seemed to know where that something could be found, and some kindly but gently reminded me of my age.

One day an old friend approached me. He is somebody in the City, certainly a person of experience and position. He asked me just what I was doing with myself, and I had to admit "nothing in particular." "Like to come and see me?" he asked. I thought I had misheard him, but he meant it and asked me to call at his office, where an appointment was arranged. I was vetted anew, and asked to report on the following Monday morning.

No doubt my readers will remember their first day at a new school: that feeling of helplessness, strange faces, strange names and strange rooms abounded—I felt lost.

However, there is much kindness in our fellow men, and I found myself working with a colleague who explained details of what seemed to me quite involved subjects. He was patient and understanding towards the new boy. Oh yes, I made mistakes; but there was no question of my being "sent up for six"—quite the contrary.

* * *

The days passed, and with each passing my confidence returned, I was able to attend to small matters without anxiety, and I began to feel that once more I had an oar in the boat.

The weeks flew past. I was sleeping better, and that glass of beer in the evening tasted like nectar.

I am hoping to pass through my probationary period without the firm going bankrupt, nor having to resort to the old routine of drawing my "winnings"!

The feeling of being a pensioner no longer worries me. I have started that "something" which may best be described as "a new job."

which go to riders finishing within 11/10ths of the winner's time.

Riding a three-year-old 350 c.c. Norton, he still managed to average 73 m.p.h. despite a ten-minute stop in the second lap to remove the rev counter after it had shaken loose from its bracket. Although Peter has been 'mad about bikes' since childhood, and has had seven machines since he was old enough to hold a licence, this was his first time in the Junior Grand Prix, which is one of the toughest road events in the world for motor cyclists. Previously he had ridden only on air-field circuits and found the change to

the 37-mile Grand Prix course tremendously exciting.

With him as his pit attendant went **Neil Beck**, a fellow motor cycling enthusiast, who is a lab assistant in Billingham Division's Engineering Development Department, and it was Neil's work on the bike which enabled Peter to reach speeds of up to 112 m.p.h. over part of the course.

Guns at Billingham

SITTING for many bone-freezing hours cramped in an isolated stone "hide" is not everyone's idea of sport.

Yet for many people this waiting is only a small price to pay for the pleasures of the ancient sport of wildfowling. It claims many devotees on Tees-side, and a move is afoot to form a wildfowling section of the recreation club at Billingham. **Mr. Stephen Mountain**, a wagonwright on Commercial Works, is the man behind it.

Through the years the technique of wildfowling has not changed much. It involves going down at dusk to some lonely estuary or coastal mudflat and awaiting the flight of the flocks of water fowl to their inland feeding grounds. Shooting takes place during this

PEOPLE

The Minister of Power has appointed **Mr. P. T. Menzies**, I.C.I. Finance Director, as a part-time member of the Central Electricity Generating Board.

Sixteen-year-old **Tom Hulse**, an apprentice at Alkali Division's Avenue Works, was one of 15 cadets chosen to represent Cheshire in the Army Cadet Force royal centenary parade at Buckingham Palace.

Alexander Young, sixteen-year-old son of Ardeer fireman **David Young**, recently toured Scotland as a flautist with the National Youth Orchestra of Great Britain. He gets his love of the flute from his father, who has played in a number of flute bands in his lifetime and two years ago was a member of the Kilwinning ensemble, who, with six other top-flight bands, contested the Scottish flute band championships.

Winner of Stevenston's Burgh Garden Competition this year is **Mr. John Gibson**, who works in the joiners' shop at Ardeer Factory. He specialises in sweet peas, dahlias and chrysanthemums.

Miss Anne Beckwith, a lab assistant in Fibres Division's Technical Service Department, recently carried off the Dairy Maid of Leeds 1960 title.

The Middlesbrough coroner recently commended three Wilton men, **Mr. Tom Richardson** and **Mr. Bill Hawkes** (Polythene Works) and **Mr. Norman Tranter** (fireman), for their bid to save a man whose clothes had caught fire after a motor cycle crash. "Our thanks are due to them. They thought nothing of the danger to themselves, their first thoughts obviously being for the injured man," he said.

Captain G. P. Kingsley Miller of the Liverpool Scottish has won the Duke of Edinburgh's Trophy Gold Medallion, which is awarded for the best marks in the T.A. or regular army in shooting competitions which stress fitness and endurance. Captain Miller is a member of the Paints and Building Materials Department of Northern Region.

An evening study of Richmond, Yorkshire, taken from the vantage point of Richmond Castle, recently won for **Mr. Norman Jefcoat** (Billingham Division) the annually awarded Half-plate Postal Club of Great Britain's Founder's Cup from more than 400 photographs submitted.

PROFITS

The Company's trading results for the first half of the year were announced as we were about to go to press. Once again they show bigger sales, bigger exports and bigger profits. Group sales to customers were £288m., which is £38m. more than for the same period last year. Group income after taxation was also up—from £20m. for the first half of 1959 to £27.6m. for the first half of 1960. An interim dividend of 1s. 3d. on each £1 unit of ordinary stock has been declared.

evening flight or at dawn, when the flocks of mallard, pigeon and teal return to their daytime resting place out at sea.

The rewards for the patience of the "guns" are always uncertain, for the birds get wise to the location of the shooting area and alter their flight routine or fly at a height out of range of the guns. A freak of nature such as an unusually high tide or an incautious move by a waiting marksman can also affect the birds' flight and result in not a shot being fired.

Recognition

THE gallant action of a Metals Division employee who saved a small boy from drowning at Stratford-on-Avon has earned the testimonial of the Royal Humane Society. The rescuer was **Mr. G. Wallsam** of Bisley Works, Kensworth.

Mr. Wallsam is a fitter who lays out the shooting grounds for the large championship shoots organised by the Clay Pigeon Shooting Association. This job recently took him to Stratford, where he saw a boy of about seven fall backwards into the river. Fully clothed, Mr. Wallsam dived in, crossed the river, and with some difficulty extricated the boy from the mud and weeds.

Luckily he is a trained first-aid. Immediately he reached the bank he started the correct sort of artificial respiration, and the boy soon recovered sufficiently to be hustled off home by a father whose relief showed itself by an exhibition of indignation. Mr. Wallsam returned to his hotel for a hot bath—and met with trouble there, too, when his soaking clothes dripped all over the room.

Taking the Chill Off

FOR the first time in Europe, solar energy is being used to heat a public swimming pool. A luxurious new saltwater pool was opened at the end of August at Ye Olde Felbridge Hotel, which is on the A22 about 30 miles south of London. The water is warmed by a solar energy heater which incorporates nearly half a ton of I.C.I.

copper 'Tube-in-Strip,' and running costs are nil, since solar energy is "free issue."

The boost in temperature required to take the nip out of the water is quite small—say 15–20° F.—and this can be maintained even when, as is generally the case, the weather is only sunny in patches. The heater has been placed at ground level and is housed in a greenhouse-like building (see picture on page 337). Metals Division's copper 'Tube-in-Strip' (panels of copper strip with integral parallel tubeways) is used for the collector plate. Briefly, the sun heats the copper panels, and the pool water, circulated by a small electric pump through the tubeways in the material, takes up the heat energy.

I.C.I. 'Tube-in-Strip' has already been used in one or two private swimming pools in England, but this is the first large-scale commercial application and is claimed to be the first of its kind in Europe. 'Tube-in-Strip' is also being used for solar energy domestic heaters in Malta.

APPOINTMENTS

Some recent appointments in I.C.I. are: **Alkali Division:** Mr. J. R. Angelbeck, Managing Delegate Director of the Paper Goods Manufacturing Co. **Head Office:** Mr. R. C. Bainbridge, Mr. A. Bell and Mr. D. R. Hunter, I.C.I. Assistant Shipping Managers; Mr. B. D. G. Ogle, I.C.I. Assistant Accountant. **Plastics Division:** Mr. J. W. Scougal, an Assistant Accountant. **The Regions:** Mr. E. H. Cox, South Wales Area Chemicals Sales Manager; Mr. J. B. Robertson, seconded from Billingham Division for a period to be Deputy Regional Manager, Northern Region, jointly with Mr. John Green.

RETIREMENTS

Some recent announcements of senior staff retirements are: **Alkali Division:** Mr. G. M. Ashwell, General Manager of the Paper Goods Manufacturing Co. (retired 31st August). **Head Office:** Mr. A. S. Evans, I.C.I. Assistant Shipping Manager (retiring 31st December). **The Regions:** Mr. R. A. Warren, South Wales Area Chemicals Sales Manager (retired 31st August).

50 YEARS' SERVICE

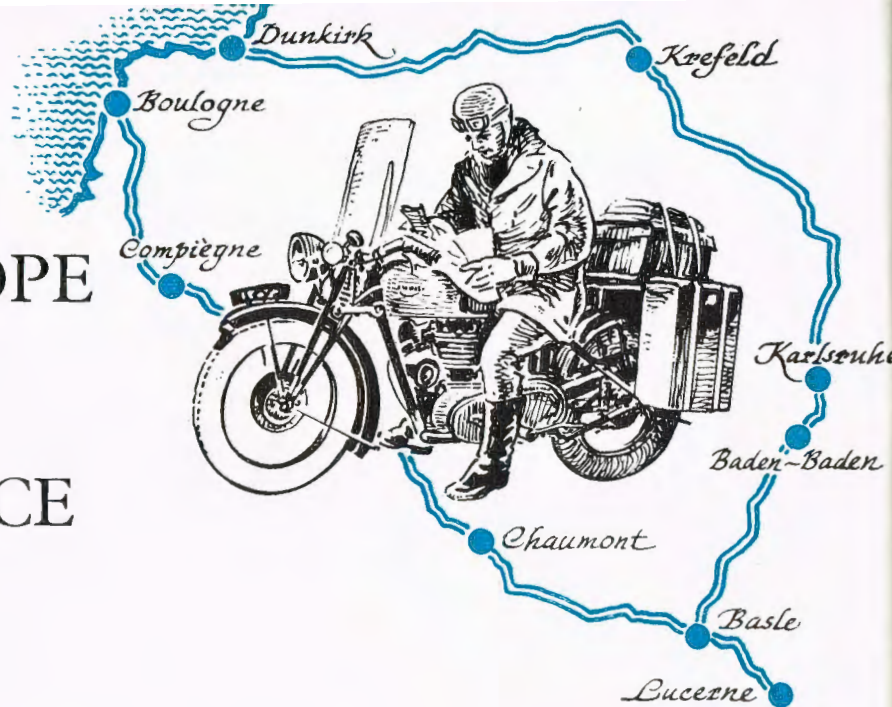
The following employees have completed 50 years' service with the Company: **Alkali Division:** Mr. R. W. Owen, Winton Works (12th September), Mr. A. L. Howe, Buxton Lime Works (15th September). **General Chemicals Division:** Mr. T. Hayes, Gaskell-Marsh Works (11th September).



I.C.I.A.N.Z.'s skyscraper headquarters dominates this view of Lonsdale Street, Melbourne. It stands 275 ft. high, contains 3 acres of external glass and cost £A3 million. (Photo: Mark Strizic, Melbourne)

2000 MILES ACROSS EUROPE ON A MUSEUM PIECE

By Terence Hall



"YOU must be absolutely crazy!"
"What, on that?"
"Take plenty of string."

"Hope your insurance is in order!"

Such were the enthusiastic comments which greeted my announcement that I intended travelling 2000 miles from Stockton-on-Tees to Switzerland and Northern Germany and back (so I hoped) by motor-cycle. After all, the bike—an ex-W.D. 350 c.c. Triumph, registered in 1946—had proved itself by doing a 60-mile run to Whitby without incident.

So with these reassuring comments and the manufacturers' encouraging note that "they must warn me that, in the event of breakdown, spares will be exceptionally difficult to obtain" I completed my arrangements and on 20th July kicked her off and sallied forth into the unknown. A few hours before leaving, the rear cylinder head gasket blew; but this did not mean much to my non-mechanical brain, and I assumed that provided the oil level was topped up periodically to replace the loss from the cylinder head, everything in the garden would be lovely. As it happened, my assumption was quite correct.

Sailing five hours late on the British Railways ferry at Dover, I arrived in Boulogne at 5 o'clock in the morning, which was enough to damp the spirits of the most ardent motor-cyclist. A thick, heavy mist, gradually transformed into fine sleeting rain, slowly wormed its way through to the very bones.

Eventually the sun made its appearance and lifted my morale. At Compiègne a halt was called for lunch—to me a most formidable task in France. Outside the hôtel de ville a notice-board displayed the menus of all the eating places in town. Having chosen the cheapest (alleged to be 16s. all in), I entered, head erect and determined not to be

rooked. It didn't help matters when I asked for the menu and was politely told that lunch was being served in the dining room and not in the bar!

By the time I had laboriously taken this in, a flock of waiters ushered me into the dining room, sat me down, and tried to outshine one another at conjuring up the most fantastic (and expensive) meals possible. After 1001 *non's* on my part, the head waiter tried a lone attack. Doggedly I stuck to my request for a one-course meal without the trimmings. At last, with the most abject expression possible on his face, he capitulated: no doubt he shot himself later in the day. The bill when it arrived somehow came to the equivalent of 19s. 6d., so the head waiter did obtain some measure of revenge.

The sense of comradeship among British tourists was most evident during the journey across France. Whenever a British car or a motor-cycle overtook us, there was always a friendly toot and wave when passing. Again, when resting by the roadside no British motor-cyclist would pass without asking whether assistance was needed as if a breakdown had occurred.

On the other hand, the lack of courtesy from the French drivers was even more apparent. These people drive like fiends out of hell. The constant blaring of the horn when it is absolutely uncalled for gradually tears one's nerves to shreds, so that by the end of the day, whenever a French car overtook me, I was trying to ride, blare my own horn in retaliation, and shake my fists at the same time.

The following morning dawned bright and sunny and we had the first taste of a continental summer. The dreary plains of northern France were behind, and the scenery now became more attractive. The roads were first class except where it was necessary to pass through a country village, because then it would have been disastrous to

travel faster than 15 miles per hour, as the road surfaces were so uneven and pitted with holes. I am convinced that these shocking surfaces through the villages were deliberately contrived as being the only way to make French drivers observe the speed limit.

Just before reaching Chaumont the suitcase started to slip away from the rear seat, so I stopped in a little hamlet to strap it on. I was immediately approached by a burly, unshaven, ragged-looking person whose breath forbade anyone to go nearer than five yards. As it happened he was very friendly, and as he had been a prisoner of war in Germany we managed to converse in pidgin German. His English was like my French—almost non-existent.

On hearing that I was English, he promptly called for his wife and family (seven boys and three girls) and painstakingly introduced me to each one in turn. By this time the whole hamlet had appeared on the scene, and a lively discussion took place on how best to secure the suitcase. I had absolutely no say in the matter, and began to get worried as time went by and no unanimous decision was being reached. Eventually all was prepared and I was allowed to leave with a resounding chorus of *Bon voyage!* speeding me on. Round the first bend I stopped and fastened the case to my own satisfaction.

On then to Basle, where I arrived at 8 o'clock in the evening. After trudging round a dozen hotels, all of which were full up, I was just thinking of a nice comfortable seat in the railway station when I spotted two acquaintances. I went with them to their hotel, where I was able to obtain the last available room. I was not told, however, that the entrance to the linen store was only accessible by going through my room. At 6 o'clock the next morning a constant rattling of the door awoke me from a very deep sleep. Thereafter there was a constant trek of chambermaids passing through for clean sheets.

Two days in lovely Lucerne followed, and with the temperature well up into the eighties it was just possible to produce sufficient energy to crawl down to the lakeside and bask in the sun.

My final destination before heading home was Krefeld in north Germany, some 600 miles up the Rhine from Basle. Stopping for petrol just near the German border, I was impressed by the prompt service at the filling station. Without being asked, the attendant washed the windscreen, checked the tyre pressures and handed over free of charge a detailed map of Germany.

It was, of course, very beautiful journeying through the Black Forest, and towards seven in the evening I reached Baden-Baden, which turned out to be so beautiful that instead of just staying overnight I remained for three days. The journey through Germany was worth while if only for the food. The most magnificent mixed grill, with of course the eternal bowl of salad, followed by *Küchen mit Sahne* and washed down with a bottle of '53 *Spatlesse*,

cost only 12s. 6d. I ate more in those three days than throughout the rest of the tour.

Most of the daytime was spent in one of the open-air swimming pools watching the beauties of Europe parade by in diamond-studded bikinis—or were my eyes deceiving me? Diana Dors certainly was left in the shade where these girls were concerned. Evenings were spent in the Kurgarten listening to a first-class orchestra playing amid beautiful surroundings to a very appreciative audience. In the background the Kurhalle and casino, ablaze with lights, made a beautiful setting among the dark woods stretching down from the mountains.

Very reluctantly I said farewell to Baden-Baden and set out for the autobahn at Karlsruhe heading for Krefeld.

As I lay by the roadside smoking, a middle-aged German scootering along on a Vespa stopped, walked over to my bike and, standing deep in thought, scratched his head and said incredulously "*Mein Gott!*" He came over to me and asked what the initials G.B. stood for. I told him that I was travelling to Krefeld from England via Switzerland, and at that, still scratching his head, he again said "*Mein Gott!*" as though such a feat on such a machine was impossible, mounted his own machine and rode away.

By seven in the evening I arrived in Krefeld and spent my last few days with some German friends whom I met when serving with the army in Germany. The weather there, in the north, was not so good: it was in fact typically English. Ignoring a suggestion that I should offer my bike to the Krefeld museum, I eventually took my leave on a rather gloomy day and set off on the last lap.

At Ostend I made friends with another motor-cyclist whose home town was Bradford. And all he wanted was to get home for "a cup of tea so thick that the spoon would stand on end" instead of "that terrible continental muck." It was arranged that he would ride behind me to watch out for any loose parts which might fall from the rear of my bike.

By half-past ten we made Dunkirk, and groping our way round the very ill-lighted docks, eventually found the ferry. We approached the steward and asked if there were any spare berths. He was very sorry, but they had all been reserved. Whereupon, pressing half a crown into his hand, he suddenly remembered that two reservations had been cancelled. And so we made England on what turned out to be a very beautiful evening.

Some new-found friends brought out some strong window cord and very kindly lashed the rear mudguard into position. Thus assisted, I eventually covered without mishap the last 350 miles.

The journey had been by no means comfortable, but the sense of achievement, combined with memories of people and predicaments, usually amusing, made it all well worth while.



'Terylene' Fashions

Photo by John Adrian